

Remarks

No claims have been amended in this response.

1. Rejection under 35 U.S.C. § 103(a)

Claims 1-11 are rejected under 35 U.S.C. § 103(a) as being unpatentable over WO 02/06266 A1 to Kooistra *et al.* ("Kooistra"). The Examiner asserts that Kooistra teaches a process for preparing 2-(6-substituted-1,3-dioxane-4-yl) acetic acid derivatives and cites specific passages on pages 5 and 6 as support for this assertion. There is an acknowledgement from the Examiner that, at the least, Kooistra differs from Applicants' claim 1 recitation of contacting the generated acid chloride with an alcohol in the presence of N-methylmorpholine. However, because the Examiner asserts that Kooistra offers guidance that the reaction of a generated acid chloride with an alcohol may be conducted under the influence of NMM or DMF, the Examiner finds Applicants' claims obvious.

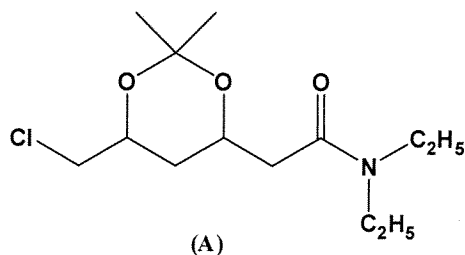
Applicants submit that page 5, line 24 to page 6, line 2 of Kooistra teaches that triethylamine (Et₃N) and dimethylaminopyridine (DMAP) are exemplary bases to be used for generating an acid chloride. The only reference to the use of N-methylmorpholine (NMM), which is a feature of the claims of the subject application, is in relation to a different type of process, which is believed to proceed by way of the pivaloyl ester intermediate, as explained in the response to the previous Office Action.

As submitted in the earlier response, Applicants' independent claim 1 recites contacting the generated acid chloride with an alcohol of formula R²OH in the presence of N-methylmorpholine. Kooistra does not teach the use of N-methylmorpholine as an aid in forming an ester from an acid chloride. Rather, Kooistra only teaches the use of N-methylmorpholine as an aid in a pivaloyl chloride / t-butanol reaction. As evidence that the pivaloyl chloride / t-butanol / N-methylmorpholine does not proceed through an acid chloride intermediate, Applicants submitted for the Examiner's consideration a copy of the Bull. Chem. Soc. Japan article that was cited by Kooistra in referencing this reaction. The article supported Applicants' position that a mixed anhydride, rather than an acid chloride, is generated as an intermediate in

the esterification process. Applicants submitted that in light of this Bull. Chem. Soc. Japan article, it was clear that the section of the Kooistra specification cited by the Examiner for its alleged teaching of the formation of an acid chloride, actually does not proceed through an acid chloride and as such, does not anticipate or render obvious the recited step of Applicants' claimed process that does proceed through an acid chloride in the presence of N-methylmorpholine.

In view of the above technical distinction between the Kooistra use of N-methylmorpholine and Applicants' use of N-methylmorpholine, there is nothing to motivate a skilled person to consider using a base recommended for use in one process in a different process. In fact, one might expect that there would have been a reason for the inventors of Kooistra to recommend the use of one base for one reaction and a different base in another reaction. Certainly, if the inventors had believed that the Et₃N and DMAP bases could be used interchangeably with the NMM, it would have been expected that the disclosure of Kooistra would have reflected this belief.

Unexpectedly, Applicants have found that there are significant advantages to using NMM when carrying out the acid chloride reaction on a large scale. Experiments carried out using Et₃N (one of the bases recommended by Kooistra in relation to this particular transformation), gave yields in the range of 40 to 90%, along with the undesired by-product (A) shown below:



In contrast, when using NMM is used as the base, yields have been observed to be consistently above 85% (*e.g.*, 88% in Example 2 of the subject application), with minimal formation of undesired by-products. The reproducibility of such an excellent and clean yield for this transformation makes NMM particularly suitable for use on large scale. This advantage of

NMM could not have been predicted from the prior art.

For at least the above reasons, Kooistra does not render Applicants' claims obvious and Applicants therefore respectfully request that this rejection be withdrawn.

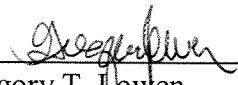
2. Conclusion

Upon consideration of the foregoing, it will be recognized that Applicants have fully and appropriately responded to all of the Examiner's rejections. Accordingly, the claims are believed to be in proper form in all respects and a favorable action on the merits is respectfully requested. The Examiner is invited to contact the undersigned with any questions or concerns that may prevent this requested allowance.

Except for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application, including fees due under 37 C.F.R. §§1.16 and 1.17 which may be required, including any required extension of time fees, or to credit any overpayment to Deposit Account No. 50-0310. This paragraph is intended to be a **CONSTRUCTIVE PETITION FOR EXTENSION OF TIME** in accordance with 37 C.F.R. § 1.136(a)(3).

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